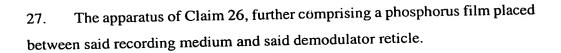
## WHAT IS CLAIMED IS:

- 1. An apparatus for optical system coherence testing comprising a transparent plate, wherein said transparent plate is made to be opaque on a surface in all areas except for an area of a pattern, wherein said pattern comprises two elongated areas, wherein said two elongated areas have a width of a dimension that would cause coherent light from the optical system to diffract upon transmitting through said area of said pattern, wherein said two elongated areas are joined at a common point, and wherein said two elongated areas diverge from said common point to form an angle.
- 2. The apparatus of Claim 1, wherein an interior of said two elongated areas includes a diffraction grating pattern.
- 3. The apparatus of Claim 2, wherein said diffraction grating pattern is arranged to diffract light in a horizontal direction.
- 4. The apparatus of Claim 2, wherein said diffraction grating pattern is arranged to diffract light in a vertical direction.
- 5. The apparatus of Claim 2, wherein said diffraction grating pattern is arranged to diffract light in both a horizontal and a vertical direction.
- 6. The apparatus of Claim 2, further comprising a second diffraction grating pattern, wherein said diffraction grating pattern has a first measure of pitch and wherein said second diffraction grating pattern has a second measure of pitch.
- 7. The apparatus of Claim 6, wherein said diffraction grating pattern with said first measure of pitch is located within an interior of a first of said two elongated areas and wherein said second diffraction grating pattern with said

second measure of pitch is located within an interior of a second of said two elongated areas.

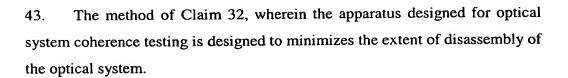
- 8. The apparatus of Claim 1, further comprising a second width, wherein a first of said two elongated areas has said width and wherein a second of said two elongated areas has said second width.
- 9. The apparatus of Claim 1, wherein said two elongated areas have a straight shape.
- 10. The apparatus of Claim 1, wherein said two elongated areas have a curved shape.
- 11. The apparatus of Claim 1, wherein said two elongated areas are aligned symmetrically with respect to an orientation of light from the optical system.
- 12. The apparatus of Claim 1, wherein said two elongated areas are aligned asymmetrically with respect to an orientation of light from the optical system.
- 13. The apparatus of Claim 1, wherein said pattern is repeated at other locations on said transparent plate.
- 14. The apparatus of Claim 1, wherein said pattern further comprises another two elongated areas, wherein said four elongated areas form a diamond shape.
- 15. The apparatus of Claim 1, wherein the apparatus is a reticle.
- 16. The apparatus of Claim 15, further comprising a spacing device attached to a surface of said reticle.

- 17. The apparatus of Claim 16, wherein said spacing device is a piezoelectric spacer.
- 18. The apparatus of Claim 16, wherein said spacing device is a transmissive crystal.
- 19. The apparatus of Claim 18, wherein said transmissive crystal is wedge-shaped.
- 20. The apparatus of Claim 18, wherein said transmissive crystal is piezoelectric.
- 21. The apparatus of Claim 16, further comprising a recording medium attached to an opposite surface of said spacing device.
- 22. The apparatus of Claim 21, wherein said recording medium is photographic.
- 23. The apparatus of Claim 21, wherein said recording medium is electronic.
- 24. The apparatus of Claim 21, further comprising a phosphorus film placed between said recording medium and said spacing device.
- 25. The apparatus of Claim 21, wherein the apparatus is mounted within a tube, wherein said tube is designed to replace a section of tube in the optical system.
- 26. The apparatus of Claim 21, further comprising a demodulator reticle attached between said spacing device and said recording medium.



- 28. The apparatus of Claim 26, wherein the apparatus is mounted within a tube, wherein said tube is designed to replace a section of tube in the optical system.
- 29. The apparatus of Claim 16, further comprising a demodulator reticle attached to an opposite surface of said spacing device.
- 30. The apparatus of Claim 29, further comprising a phosphorus film placed between said recording medium and said demodulator reticle.
- 31. The apparatus of Claim 29, wherein the apparatus is mounted within a tube, wherein said tube is designed to replace a section of tube in the optical system.
- 32. A method for optical system coherence testing, comprising the steps of:
- a. in an optical system, aligning a light source with an apparatus designed for optical system coherence testing and with a means to observe interference patterns;
- b. transmitting light through the apparatus designed for optical system coherence testing; and
- c. observing interference patterns from said transmitted light with the means to observe interference patterns.
- 33. The method of Claim 32, wherein said aligning provides that light incident upon the apparatus designed for optical system coherence testing is at a non-perpendicular angle.

- 34. The method of Claim 32, wherein said aligning provides that light incident upon the means to observe interference patterns is at a non-perpendicular angle.
- 35. The method of Claim 34, wherein said aligning is provided by a wedge-shaped transmissive crystal.
- 36. The method of Claim 34, wherein said aligning is provided by a transmissive piezoelectric crystal.
- 37. The method of Claim 34, wherein said aligning is provided by a piezoelectric spacer.
- 38. The method of Claim 32, wherein the apparatus designed for optical system coherence testing tests for spatial coherence.
- 39. The method of Claim 38, wherein the apparatus designed for optical system coherence testing tests for horizontal spatial coherence.
- 40. The method of Claim 38, wherein the apparatus designed for optical system coherence testing tests for vertical spatial coherence.
- 41. The method of Claim 38, wherein the apparatus designed for optical system coherence testing tests for both horizontal and vertical spatial coherence.
- 42. The method of Claim 32, wherein the apparatus designed for optical system coherence testing tests for temporal (longitudinal) coherence.



- 44. The method of Claim 32, wherein the means to observe interference patterns is a recording medium.
- 45. The method of Claim 44, wherein the recording medium is photographic.
- 46. The method of Claim 44, wherein the recording medium is electronic.
- 47. The method of Claim 32, wherein the means to observe interference patterns is visual observation facilitated by a demodulator reticle.